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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,558	01/11/2002	Jian Fan	10018003-1	9516

7590 03/28/2005

HEWLETT-PACKARD COMPANY
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EXAMINER

CHANG, JON CARLTON

ART UNIT	PAPER NUMBER
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2623

DATE MAILED: 03/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/044,558	FAN, JIAN	
	Examiner	Art Unit	
	Jon Chang	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-25 is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/11/02</u> . | 6) <input type="checkbox"/> Other: ____. |

Drawings

1. The drawings are objected to because they are not of sufficient quality for publication. Note the various unclear handwritten entries in a number of the figures. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 9, 24 and 25 are objected to because of the following informalities:

a) Claim 9 does not end with a period. Also, it includes three periods elsewhere in the claim (within the computer code, after each word "EDGE"), which is not permitted

(see MPEP 608.01(m)). The Examiner notes that the presence of computer code in the claim is NOT objected to, as the metes and bounds are ascertainable by a person of skill in the art.

b) Claim 24 does not depend from a previous claim, since it depends from claim 25. Similarly, claim 25 also does not depend from a previous claim, and in fact depends from claim 26, which does not exist. These problems appear to be the result of minor typographical errors, as claim 24 seems to correctly depend from claim 23, and claim 25 seems to correctly depend from claim 24.

Appropriate correction is required.

Allowable Subject Matter

3. Claims 1-25 are allowed.

Claim 1 requires classifying line segments of pixels within the image by edge-bounded averaging. The specification clearly defines the process of edge-bounded averaging. This feature, in combination with the other elements of the claim, are neither disclosed nor suggested by the prior art of record. Claims 18 and 23 require the same limitation. All other claims depend from claims 1, 18 and 23 (assuming claims 24 and 25 ultimately depend from claim 23).

References Cited

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 4,896,364 to Lohscheller teaches detecting edges based on an average of environment pixels around a pixel.

U.S. Patent 5,680,479 to Wang et al. teaches utilizing connected components for classifying image data as text or non-text.

U.S. Patent 5,949,555 to Sakai et al. teaches calculating density by counting black pixels in a connected component and dividing the total pixels in a rectangle by the number of black pixels (column 23, lines 29-31). This is somewhat similar to some of the steps of edge-bounded averaging as described in Applicant's specification. However, Sakai does not teach utilizing this process for classifying line segments of pixels.

U.S. Patent 6,307,962 to Parker et al. teaches segmenting a document image into regions for the purpose of compressing it.

U.S. Patent 6,470,094 to Lienhart discloses a method for locating text in images by classifying pixels in an edge image.

Japanese Patent Publication 2000-50109 to Mancuso, teaches averaging adjacent pixels within a window for noise removal.

"An Edge-Based Block Segmentation and Classification for Document Analysis with Automatic Character String Extraction" by Park et al. teaches edge-based block segmentation and classification with automatic character string extraction.

Conclusion

5. This application is in condition for allowance except for the following formal matters:

The objections to the drawings and claims noted above.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.


Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jon Chang whose telephone number is (703)305-8439. The examiner can normally be reached on M-F 8:00 a.m.-6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703)308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2623

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jon Chang
Primary Examiner
Art Unit 2623

Jon Chang
March 21, 2005